

Review Team Appraisal of Title

(9-12 Mathematics)

This appraisal form is provided for use by educators responsible for the selection of instructional materials for implementation with districts and charter schools across New Mexico to meet the needs of their student populations.

This appraisal form should be used in conjunction with the publisher provided Form D: Research Based Effectiveness Determination that supports this reviewed material which can be found on the Instructional Material Bureau website.

<https://webnew.ped.state.nm.us/bureaus/instructional-materials/the-adoption-cycle/>

Text Title	enVisionAGA Geometry	Publisher	Pearson Education
SE ISBN	9780328937639	TE ISBN	9780328947201
SW ISBN	N/A	Grade Level/Content	Grades 9-12

Core Material Designation *(Core Material is - the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)*

Recommended _____ Recommended with Reservations ___x_____ Not Recommended _____

Total Score

Reviewer #55	Reviewer #57	Average Score
81.8%	88.9%	85.3%

Standards Review - *Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.*

Reviewer #55	Reviewer #57	Average Score
88.1%	94%	91%

Materials align with grade level standards.
<p><i>Statements of appraisal and supporting evidence:</i></p> <ul style="list-style-type: none"> ● Most of the standards are addressed and meet the evidence. <ul style="list-style-type: none"> ○ Some examples of some Standards that were partially met: HS.SCP.B.7, HS.GCO.D.12, and HS.GCO.D.12 ● The standards are covered well throughout the entirety of the materials. ● Grade level standards are listed at the beginning of each section, on the side columns in the teacher’s edition, and met within the content of the TE and SE. ● The standards are not only listed but the publisher gives examples as to how they are actually covered within each topic.
Materials align to standards for mathematical practice.
<p><i>Statements of appraisal and supporting evidence:</i></p>

- TE shows many Mathematical Practices throughout the text, in habits of mind, and in the Mathematics overview of each lesson.
- Additional evidence found by the review team also shows that there are all 8 Mathematical Practices throughout the TE and shown within the SE.
- The Mathematical practices are presented at the beginning of each lesson as well as in side notes in both the SE and the TE where they are specifically met within the content of the chapters.

Materials show aspects of rigor.

Statements of appraisal and supporting evidence:

- The practice sets of problems were about ½ conceptual in nature, mostly in using proof, and verifying theorems.
- There was procedure embedded within the proof sets.
- There are application and real life questions within each section, but they are “low level” that match the examples.
- The materials have less procedural skill and fluency aspects than they do conceptual and application.

Math Content Review - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the specific reviewed content area.

Reviewer #55
64.3%

Reviewer #57
78.6%

Average Score
71.4%

Materials are consistent with grade level content, supporting the intent of the delivery and understanding of mathematics.

Statements of appraisal and supporting evidence:

- This text had many proofs throughout the lessons, and many thought questions at a typical geometry level.
- There were definitions and proofs of geometric theorems provided to students in the text. However, the publishers have “renamed proofs” using the chapter and number they are presented within the chapter, which causes confusion later.
- There is no explanation of the content for teachers to help them present information better. We were excited to see Teacher PD online, then realized it was not helpful PD, but a repeat of the information in the book.

Materials support student learning of mathematics.

Statements of appraisal and supporting evidence:

- Online materials have opportunities for teachers to have tutorial sections for students to access.
 - TE and SE makes a reference to the online website.
- There are a variety of different problem types for the students to solve and understand the content of the materials.
 - Examples include Performance Tasks, Explorations, Quizzes, Chapter Assessments, STEM tasks, along with Mathematical Modeling in 3 acts.
- TE and SE references the Mathematical Practices in each lesson.
- The digital component of the material allows teachers the ability to customize for individual students to meet their learning needs.

All Content Review - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.

Reviewer #55
68.75%

Reviewer #57
77.5%

Average Score
73%

Materials are coherent and consistent with the high school standards which all students should study in order to be college and career ready.

Statements of appraisal and supporting evidence:

- TE has a section that shows the standards for Geometry.
- The start of each chapter references the middle school and Algebra 1 standards that support the Geometry standards within the chapters, but it is cursory at best.
- There is a pre-assessment that practices past standards and has an online version which assigns a study plan for students who show to be behind.

Materials are well designed and take into account effective lesson structure and pacing.

Statements of appraisal and supporting evidence:

- TE has a pacing guide in the front of each chapter.
- TE has a pacing guide for the entire curriculum at the front of the book to add in yearlong pacing.
- TE and SE follow the same structure of how the lesson materials are taught.
 - The examples and exercises go perfectly together for ease of lesson structure.
 - There are motivation pieces, monitoring progress, and mini quizzes teachers can access to make sure their pacing is on track.

Materials support teacher planning, learning, and understanding of the standards.

Statements of appraisal and supporting evidence:

- The content lists the standards to be covered in each section for easy reference by the teacher.
- The material did not provide any learning and understanding of the standards from the teacher's point of view.

Materials offer teachers resources and tools to collect ongoing data about student progress on the standards.

Statements of appraisal and supporting evidence:

- Online tools reference that there are assessments that place kids into more practice tracks.
- TE and SE have Chapter tests to track student progress on skills.
 - TE and SE has Performance Tasks that allow the students to progress in their skills.
 - There is not much else provided about the actual tracking of progress.

Materials give all students extensive opportunities and support to explore key concepts.

Statements of appraisal and supporting evidence:

- Key concepts are highlighted at the beginning of each section.
- Differentiated Instruction and ELL strategies are found in the TE for easy access. They suggest to teachers multiple ways to reach each student with different teaching strategies.
- Additional resources are available to the teacher both online and in a printable version to give students who are struggling or advanced what they need.

Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms.

Statements of appraisal and supporting evidence:

- The digital piece has some helpful aspects students can use to enhance their learning:

- text book is online
- math content videos
- online assessment
- online math tutor

Materials can be easily customized for individual learners.

Statements of appraisal and supporting evidence:

- Online materials make a reference to this, but the team was unable to see how individualized online materials can be customized.
- There are three differentiated worksheets for each lesson available.

Materials take into account cultural perspectives.

Statements of appraisal and supporting evidence:

- There are pictures and some problems that talk about other aspects of culture.
 - There is not enough detail or depth of the cultures represented within the materials.
- There are several references to different cultures in some of the application problems. However, they only mention something that is culturally relevant; none of them go into any kind of detail or background.
- All cultural pieces are at a level 1, or are not present at all. There are few people at all. One of the reviewers noted that out of the people presented about 60% were white, about 35% were black, and they found 1 “brown” person and one “purple” person, which means that our culture is not clearly reflected.

Reviewer Professional Summation - *These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.*

Reviewer #55 background and experience: I am a level 3 teacher with 18 years of teaching experience ranging from 7th grade mathematics to high school geometry, and 7th and 8th grade science. I have a Bachelor’s in Engineering, a Master’s in Curriculum and Instruction with an emphasis in Secondary Mathematics, a Master’s in School Administration and an Educational Doctorate in School Improvement Leadership. I have been on multiple district curriculum review and alignment teams over the last 18 years

Professional summary of material:

The geometry book offered by Pearson looks like most typical geometry textbooks, starting with definitions, moving to lines and angles, then to triangles, followed by quadrilaterals and other polygons, circles, then probability and statistics. The best part of this text set is the 3 part modeling and the STEM problems, but there are not enough of these in the text.

When it comes to rigor, this book was very conceptually relevant, but did not always explain how theorems are developed or why they are used. There is a decent amount of procedural practice. I was highly disappointed in the lack of application questions, especially in a geometry text, because there are so many rich, thought provoking application questions available in other resources. Also, It is frustrating when a publishing company decides to list theorems by a random number they assign, rather than use the name of the actual theorem. This muddies the water for both teachers and students unnecessarily.

Bottom line, as a seasoned teacher, I could teach with this text, but I would have to spend time fixing the theorems and building in the missing conceptual and application pieces.

Reviewer #57 background and experience: I am a level three mathematics teacher in the state of New Mexico with 15 years' experience in the areas of Algebra 1 through Pre-Calculus. I am AP certified and have multiple years' experience as a department head for my district. I have my Master's degree in Educational Administration.

Professional summary of material:

Pearson Envision Geometry is a solid set of materials for teachers and students to use in the Geometry classroom. The materials cover the majority of the Common Core State Standards for Geometry. The book is incredibly well organized and easy to follow. I appreciate the extra information the publisher provides to teachers in the teacher's edition and throughout the digital component. This information is really helpful not only to seasoned teachers but also teachers just coming into the profession. The technology piece has a wide range of tools beneficial to the content being taught. The teacher's edition and the technology piece provide strategies for teachers to use to meet the needs of all the students in their classroom from differentiated instruction to English Language Learner strategies to use. The conceptual and application parts of the materials are strong, well organized, and easy to access and follow. The exercises touch on the concepts necessary for mastery of each standard covered in that topic. There is a good application part to the materials as well, especially when looking at the STEM project and performance tasks embedded throughout the material. While I have a few reservations, overall it is a good set of geometry material.

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Text Title	enVisionAGA Algebra II	Publisher	Pearson Education
SE ISBN	9780328937646	TE ISBN	9780328947249
SW ISBN	N/A	Grade Level/Content	Grades 9-12

Core Material Designation (Core Material is - the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)

Recommended _____ Recommended with Reservations X Not Recommended _____

Total Score

Reviewer #70
 ___73%___

Reviewer #72
 ___72%___

Reviewer #65
 ___87%___

Reviewer #67
 ___87%___

Reviewer #69
 ___87%___

Average Score
 ___81%___

Standards Review - Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.

Reviewer #70
 ___78%___

Reviewer #72
 ___80%___

Reviewer #65
 ___99%___

Reviewer #67
 ___99%___

Reviewer #69
 ___99%___

Average Score
 ___91%___

Materials align with grade level standards.

Statements of appraisal and supporting evidence:
 The materials are aligned with almost all standards. In comparing the Correlations in the TE Program Overview to Appendix A, the text addresses all standards designated by Appendix A, except A.SSE.1a. An in-depth analysis of the standards reveals that there are several standards the text indicates are

IM= Instructional Material SE= Student Edition TE= Teacher Edition SW= Student Workbook

addressed, but the text does address the full intent of the standards. Additionally, there is a significant amount of material included in the text that is not aligned to the Algebra 2 standards according to Appendix A.

Materials align to standards for mathematical practice.

Statements of appraisal and supporting evidence:

The materials are very effective in labeling the mathematical practices, but the mathematical practices are not addressed to the intent expected. The mathematical practices are not in balance. There are limited to no opportunities for students to engage in the mathematical practices, and whether students engage in the mathematical practice is contingent on whether the teacher assigns those particular problems.

The performance tasks provide opportunities for students to be engaged in multiple mathematical practices, but there is only one performance task per lesson. For example, in mathematical practice #5, students engage in this practice by choosing a tool appropriately. Students can choose a formula, graphing calculator, or spreadsheet to help persevere and solve the problem. The students do not choose the appropriate tool; they are told which tool to use. Almost all of the publisher's citations regarding mathematical practice 5 do not address the true intent of the practice.

Materials show aspects of rigor.

Statements of appraisal and supporting evidence:

The three aspects of rigor are not in balance. Students are not provided the opportunity to develop conceptual understanding in many of the places where the publisher highlights conceptual understanding. In example #1 on page 40 in the SE, students are expected to develop a conceptual understanding of solving an equation by being shown how to graph the equation, but students are not provided the opportunity to develop conceptual understanding of solutions to a system and what this represents in context.

Students have sufficient opportunities to gain procedural fluency. This is evidenced by the problems in the SE related to polynomials. Teachers could also assign more problems using the differentiated resources like Examview, if needed. Students have ample opportunity to engage in application problems, but students do not necessarily engage in the mathematical practices in many of the application problems. In the performance tasks, students engage in application of real world problems using the mathematical practices. These performance tasks are embedded through the resource.

Math Content Review - *Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the specific reviewed content area.*

Reviewer #70

___54%___

Reviewer #72

___54%___

Average Score

___54%___

Materials are consistent with grade level content, supporting the intent of the delivery and understanding of mathematics.

Statements of appraisal and supporting evidence:

The grade level standards addressed in this resource are partially aligned to the expected grade level content standards. Students are not provided the opportunity to engage in the full intent of the standards to include aspects of rigor and the eight mathematical practices. Teachers will need to add supplemental resources and/or be very selective in what they assign for students to engage in the entire

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content standard. Additionally, a significant portion of the text aligns to standards not specified as Algebra 2 content in Appendix A.

The resources do not provide adequate support for the teacher to deliver differentiated instruction. They only provide differentiated resources as optional assignments. The publisher labels where students should be engaged in a particular math practice or develop conceptual understanding. However, these labels are not always accurate. The materials provide many resources to assist teachers in differentiation, but very little to no support for the delivery and understanding of mathematics.

Materials support student learning of mathematics.

Statements of appraisal and supporting evidence:

The materials do not support the teacher or students in learning mathematics to the full intent of the math practices, aspects of rigor, and common core standards. Many of the lessons, activities, and questions are very leading and do not allow for mathematical discourse (ie. TE on page 224B). The prompts labeled *Facilitate Meaningful Mathematical Discourse* do not allow for it. The question stems are very leading. Once answered, the discourse can not continue. Students must be allowed to reason, analyze, critique, and use correct math language to engage in meaningful discourse.

In many cases in which the publisher denotes conceptual understanding, students are actually using procedures to attempt to gain a conceptual understanding, which is not supported by current research. In these cases, students are merely memorizing procedures, rather than developing conceptual understanding (ie. page 275, example 4, SE). Students are not developing a conceptual knowledge of composite functions. They are merely completing a procedure to find the solution. Students will not keep the knowledge of this procedure unless they are continuously provided opportunities to practice and gain procedural fluency, which is not conceptual understanding.

All Content Review - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.

Reviewer #70
___63%___

Reviewer #72
___56%___

Average Score
___60%___

Materials are coherent and consistent with the high school standards which all students should study in order to be college and career ready.

Statements of appraisal and supporting evidence:

The materials are partially aligned with expected grade level standards. The resource does not represent a fully consistent and well developed curriculum. The text includes large amounts of material that should not be learned in Algebra 2. Students are not given many opportunities for conceptual understanding, distributed practice, mathematical discourse, engagement of the mathematical practices, or making connections between and across concepts.

The materials adequately provide many resources for teachers and students. The topic planner provides teachers with a general understanding of each concept, video support, STEM activities, and the math practices. However, teachers have very limited opportunities to gain new knowledge to strengthen their understanding of the concepts.

Materials are well designed and take into account effective lesson structure and pacing.

IM= Instructional Material SE= Student Edition TE= Teacher Edition SW= Student Workbook

Statements of appraisal and supporting evidence:

The materials are well designed and take into account effective lesson structure, but not pacing. Students consistently engage in a 4 step approach: Step 1- Explore, Step 2- Understand & Apply, Step 3- Practice & Problem Solving, Step 4- Assess & Differentiate. In Step 1 (Explore), students do not fully engage in conceptual understanding (ie. page 171B, polynomial functions). In step 2 (Understand & Apply), students are expected to understand and apply their conceptual knowledge. In many of the cases, the publisher tells the students what they should understand. Students do not have the time or the opportunity to develop conceptual understanding before they are expected to apply that knowledge. In Step 3 (Practice & Problem Solving), students have opportunities to gain procedural fluency (ie. page 177, roots of polynomials). In step 4 (Assess & Differentiate), teachers have additional support via the lesson quiz to assess students and provide differentiation using an item analysis and RTI model. In sum, the pacing is not in balance.

Materials support teacher planning, learning, and understanding of the standards.

Statements of appraisal and supporting evidence:

The teacher materials support lesson planning by providing a guide in the TE Program Overview that contains the lessons, standards addressed, and pacing for a traditional and block schedule. In the Program Overview, the publisher provides insight into the 4 step instructional model, which is embedded throughout the materials. A table of contents is presented, which gives the topic overview, topic opener, enVision STEM projects with page numbers, as well as the lessons, standards, and math practices with page numbers. Prior to every topic, teachers see the math background for Focus, Coherence (looking back, this topic, and looking ahead), and the three aspects of Rigor. A topic planner is provided which shows every topic, including the lesson number, title and pacing, vocabulary, objective, and essential understandings with standards.

Although the materials provide many supports for the teacher, they do not support the teacher sufficiently for the learning and understanding of the standards or in planning their delivery. The information provided is merely an overview of the standards and what the students will be learning. It does not provide in depth knowledge for the teacher. In addition, there is no support on grouping, scaffolding, and related activities.

Materials offer teachers resources and tools to collect ongoing data about student progress on the standards.

Statements of appraisal and supporting evidence:

Although the instructional materials provide many resources, they do not adequately support teachers and students in the RTI model using targeted interventions that directly assess students misconceptions.

The materials provide teachers with a Topic Readiness Assessment for every topic and for the beginning of the year to differentiate or scaffold instruction. Teachers may administer the assessment, and then use the item analysis and the individualized study plan based on the results.

After the teacher models examples of various concepts, the materials offer a formative assessment question, *Try It!*. The materials do not provide more than 1 or 2 *Try it!* questions per example, and no further support if students do not complete the *Try it!* question successfully. The materials highlight common errors, but do not provide insight into student thinking. The materials do not provide different strategies to help struggling learners, or even allow students the opportunity to make errors.

The materials provide some support for the teacher in differentiated instruction materials, such as Reteach To Build Understanding (Intervention), Additional Practice (Intervention and On Grade Level), Enrichment (Advanced), Mathematical Literacy and Vocabulary (Intervention and On Grade Level), and Digital Resources and Video Tutorials, but provides no support for the teacher on how to implement differentiated instruction.

Materials give all students extensive opportunities and support to explore key concepts.

Statements of appraisal and supporting evidence:

Students have opportunities to explore key concepts, but do not have enough support or time to develop conceptual understanding or make connections through mathematical discourse within the exploration phase. Students are often told by the publisher what they should understand, and then are asked to apply that understanding by practicing procedural skills and application problems. However, students have not achieved full conceptual understanding, which leads students to memorization of rules and procedures.

The curriculum does not allow ample opportunity for students to engage in each standard more than once, unless the teacher supports the curriculum with additional resources. There seems to be no spiraling of concepts from topic to topic. Instead, the only engagement of a standard comes through at the end of each lesson.

Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms.

Statements of appraisal and supporting evidence:

Many digital resources are available, such as virtual nerd, Math IXL, and PearsonRealize.com. Teachers are provided an online assessment tool, Topic Performance Assessments, at pearsonrealize.com. In Mathematical Modeling in 3 Acts, students are provided video support as an engagement into the activity. Although the materials sometimes highlight that a graphing calculator or spreadsheet would be a useful tool, nowhere does it support teachers in the explicit instruction on how to use these tools. It is not clear if all digital resources are compatible with multiple browsers. The Virtual Nerd app is only compatible with IOS and Android.

Materials can be easily customized for individual learners.

Statements of appraisal and supporting evidence:

The materials can be easily customized for individual learners. The materials provide teachers with an online tool to assign formative assessments to students. Teachers are provided an item analysis that can be used with an RTI model to provide interventions.

The publisher highlights many differentiated resources, such as Reteaching to Build Understanding, Additional Practice, and Enrichment that are available with each lesson. This includes how the teacher can differentiate practice using the online web-based MathXL . The materials also provide tutorials on using the Virtual Nerd app. The ExamView Assessment Generator is available to support teachers in differentiation.

Although the material provides adequate resources to provide support for individual learners, there is little to no support for the teacher in the implementation stage of this process. In addition, the materials provide no evidence of opportunities for collaboration online from teacher to students and/or student to student.

Materials take into account cultural perspectives.

Statements of appraisal and supporting evidence:

The materials do not take into account cultural perspectives. Students are not provided opportunities to draw upon their home language or culture. The materials do not reflect the culture, language, or lived experiences of a multicultural society. However, the materials support English Language learners via the Spanish/English Visual Glossary in the SE and representation of the four language arts domains (reading, writing, speaking, and listening).

Reviewer Professional Summation - *These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.*

Reviewer #70 background and experience: Finished the 13th year of education teaching secondary mathematics in both middle and high school experience in New Mexico. Holds a level 3 license and has kept current regarding best practices for teaching and learning mathematics by attending and leading a variety of professional development opportunities at the local, state, and national level. Teaching practices are grounded in sound research provided by NCTM and other reputable sources.

Professional summary of material:

Reviewer #72 background and experience: 15 years of experience teaching secondary mathematics in both middle school and high school. Currently the math department head at her building. Been on committees for the district to realign CCSS. Member of the NM Teacher Liaison Program and the Teach Plus Organization for the past two years. Attended multiple professional developments, including ELL training, unpacking standards, teacher evaluation, and NM Teach.

Professional summary of material:

Reviewer #65 background Level three teacher, teaching for 20 years, taught middle school for 8 years and high school math for 12 years, taught college classes for the last 12 years. Minor in mathematics. Masters in curriculum and instruction.

Professional summary of material:

I would recommend this title for adoption. The title lends itself to finding the math practices and building on them very easily. Also, all Algebra 2 standards are included and a step by step approach is included with the majority of standards. A video for professional development is included giving assistance to teachers with fewer years of experience.

Reviewer #67 background and experience: Teaching math for 20 years. BS in mathematics, MS in diagnostics and a PhD in Math. Hold a sped license and administration license. Currently teach Algebra 2, Calculus AB and BC AP, and AP Computer Science Principles.

professional summary of material: I

I was very impressed with the Pearson Curriculum. I would highly recommend this material. A good job was done in addressing all standards and mathematical practices. The material was easy to navigate. The tools and resources are good for the experienced teacher and new teachers who don't have the experience. The STEM projects and application problems included with every unit help students "buy in" to the math, making it more relevant to them.

Reviewer #69 background and experience: I have a Bachelor's Degree in Mathematics and have been teaching for 10 years. I have experience teaching both high school and college mathematics. I am a NM level 2 teacher. I am currently teaching Algebra 1 and Geometry.

Professional summary of material:

I highly recommend this title for adoption. The title provided enough to help teachers and students of New Mexico. The title covers all standards, and the assignments and examples were aligned to Common Core State Standards and Mathematical Practices. This title also provided very useful online resources to help teachers and students in the learning process of Algebra 2.